

W6IFE San Bernardino Microwave Society Newsletter

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The 2 **April 1998** meeting tech talk will be Chuck, WA6EXV on antenna measurements. Elections this month. Your dues could be due- see your mail label. The SBMS meets at the American Legion Hall 1024 Main Street (south of the 91 freeway) in Corona, CA at 1930 hours local time on the first Thursday each month.

Last meeting- SBMS President Chip, N6CA presented the SBMS plaques for top score in the ARRL 10 Ghz and Up Cumulative Contest to Robin, WA6CDR in the 10 Ghz only category and to Dave, K6OW in the 10 Ghz and Up category. Like Robin indicated up on receiving his plaque, it is the effort of the group to get out and support the band use that makes these things possible.

Doug, K6JEY was sick last meeting so his talk on rubidium standards will be postponed until July. Several others filled in the slot by providing information on what they are doing. Robin brought in two representatives of Tech America, a Tandy Corporation spin off which will have a large parts stock order business with no minimum order. Dave Mackey WA5AVK (email WA5AVK@ibm.net) spoke on their new business and Bill Pritharage had catalogs to handout. The web site is Techam.com and there is a tech support 1-800 number.

Chip, N6CA talked about his subreflector dish and design of its feedhorn. Dick, WB6DNX had a "typical" block diagram of a 2 Ghz Transverter using the blocks from the commercial "2 Ghz" hardware from the systems being retired due to the FCC Spectrum Auctions. For those who picked up the 2 Ghz image reject mixers last meeting, Chuck, WA6EXV had the modification boards and documentation to bring the IF phase shift amplifier to 144 MHz. Ed, W6OYJ had documentation on modifications to the Qualcomm PLL boards to make them useful LOs for ham bands.

Dave, WB6OVZ had his 2.3 Ghz loop yagi and tool jig to show and tell how he lined up all the holes and build the antenna. A beautiful antenna Dave. There was some discussion on the minimum effort in QST in reporting the 10 Ghz contest and the numerous errors, all which tend to kill the future of the contest which was to promote the use of the bands. A committee is to write ARRL, but there is some uncertainty about response since it would appear that over the years there has been a great lack of acceptance of ideas and criticism from west of the Hudson river. There was a motion to setup a life membership, but the membership declined to have such a membership status in the Society. Bill, WA6QYR was presented a Meritorious Service Award for the years of excellence in editing and publishing the SBMS Newsletter. Ken, WB6DTA carried in some more waveguide and microwave parts. John Alday, W6DCC, a local ham donated a number of microwave things to the group. 32 people present at the meeting.

1998 SBMS Officer Nominations- the following were nominated for office: President, Dick, WB6DNX; Vice President Ken, WB6DTA; Recording Secretary Eric, KD6GLP; Corresponding Secretary Larry, K6HLH; treasurer Dick, K6HIJ; Editor Bill, WA6QYR. Nominations will be opened again at the April meeting where elections will take place.

SBMS Annual dinner, 28 February at Vince's Spaghetti House in Rancho Cucamonga had the following people present: Joe, WA6PAZ and wife; Dave, K6OW; Dave, WB6OVZ; Craig, KE6ONZ and wife; Ed, KE6BAA and wife; George, K6MBL and wife; Bill, WA6QYR and wife KC6UTF; Eric, KD6GLP and friend; Dick, K6HIJ and wife, Chuck, WA6EXV and wife; Larry, K6HLH and wife. Good food. Thanks to Eric for arranging the dinner.

Scheduling

2 Apr. SBMS ELECTIONS

7 May Eric, KD6GLP and Jeff, KN6VR video transmission link hardware talk

4 June George, K6MBL Magnetron operation

2 July Doug, K6JEY Rubidium standards

Activity reported at the March SBMS meeting- Jim, K6ML has a 10 Ghz Qualcomm station started; Ed, KE6BAA reported that the Drake down-converters reported in QST have been available at the swap meet for less than reported in QST; Dave, WB6OZV built the 2.3 Ghz loop yagi; Kurt, K6RRA built the 1.2 Ghz loop yagi; Matt, KE6ALM is working on a 2 Ghz receiver; Derek, KN6TD built a subreflector for his 2 ft dish; Eric, KD6GLP worked on his 2 Ghz video units; Larry, K6HLH has his 2.3 Ghz Downeast Microwave kit working; Al, K6LJM tried the VE2DBE (<http://www.francomedia.qc.ca/~ve2dbe/english1.html>) and <http://edcwww.cr.usgs.gov/landdaac/gtopo30/gtopo30.html>) radio terrain program with problems (now functions, ed.); Ed, K6ODV is near completion on 10 Ghz station; Dave, KF6OQK has a motion detector 10 Ghz station start; Tim, N6DLC listened to the N6XQ 1.2 Ghz beacon; Chip, N6CA investigated TVRO rain attenuation problems; Joe, K6IBY worked on 1.2 Ghz hardware; Chuck, WA6EXV built some 2 Ghz image rejection mixer boards, did some investigations on 10 Ghz feed for the 22 inch dishes resulting in near theoretical gains and 15 dB sidelobes, plans to be on Cory Pk. (NV) during the June contest with 2.3 to 24 Ghz rigs (clear shot to Heaps Pk. or Keller Pk. in DM14), made some boxes for the 10 Ghz Qualcomm cut-apart amplifier board which had 16 dB gain +5 dBm at 10 Ghz without tuning; Bill WA6QYR worked on a smart battery charger for the big deep cycle batteries used in mountain topping; Dick, WB6DNX worked on a 1.2 Ghz

loop yagi and 2 Ghz radio part diagram with crystal order info and had some 2nd generation parts available; Ed, W6OYJ worked on 2 Ghz transverter and had Qualcomm synthesizer documentation (Chuck, WB6IGP and Kerry, N6IZW are still the source of Qualcomm "kits"); Ken, WB6DTA worked on his 10 Ghz Qualcomm parts. Wow a bussssy bunch.

"Wants and Gots"

for sale-

HP 432 Power meters \$20 each Dick, WB6DNX 714-529-2800

175 pound antenna rotator for large dish Ed, W6OYJ 619-453-4563.

10 Ghz gunnplexer hardware and receivers Eric KD6GLP 626-297-2617.

PIO/ filter program for 8051 type Dick K6HIJ 760-253-2477.

Want 10 Ghz brick osc Eric, KD6GLP 626-297-2617

RF EXPOSURE PROGRAM: As mentioned at March meeting, go to my Homepage at(<http://www.local.net/~k6ljm/>) , to myPage2 RF Resources Page, under software. 73's, AL, K6LJM

"The George" QTH-QTH event of March 7 Log books are to be sent to Ed, W6OYJ at his San Diego address in banner above.

WA6QYR worked WA6EXV on 2.3 and 10 Ghz, both are in DM15dp.

1296 MHz QSOs between W6OYJ and N6IZW. Both are running 100 milliwatts. N6XQ and W6OYJ had a contact via bounce off Mt Soledad. Strong signals. Jack had 10 watts and 6-ft dish antenna.

10.368 GHz QSOs with N6IZW, WB6IGP, W6DXJ, and W6OYJ via Mt San Miguel repeater.

March San Diego Report:

W6OYJ completed conversion of one of the older "large" 1152 MHz Qualcomm rf synthesizer boards, similar to some distributed at an earlier SBMS meeting. This board, as well as the newer and smaller "1152 " boards will produce accurate low-level markers at harmonics of 1152 including 2304, 3456, 5760, 10368, and 24192 MHz.. They also can be modified to produce +10 dBm of 1152 MHz output for use as an LO for 1296 MHz. Documentation of the modification is available.

At the 3/16/98 meeting of the Microwave Group of San Diego, a set of demonstrations was set up by Kerry Banke, N6IZW of multipath and polarization experiments in support of a forthcoming textbook co-authored by Dr. John Kraus, W8JK. A 100 milliwatt 10.3 GHz Gunn source and power meter with small horn antennas were set up a few feet apart over a flat table covered with aluminum foil. Received power was monitored while the source was elevated and nulls and peaks were observed. Polarization was changed from vertical to horizontal and the experiment repeated. The table was removed and results observed. Cross-polarization effects were noted. The antennas were then both changed to circular polarization types and measurements again made.

Just in time for the Home-to-Home event, both N6IZW and W6OYJ completed construction of 1296 transverters. Their QSO during the event was the first QSO for either operator on the band. Although currently at the 100 milliwatt level, both have near term plans to get to about 10 watts. WB6IGP and W6DXJ are both working on 1296 rigs, aiming at Tx power of about 1 watt to start.

73s from Ed, W6OYJ

73's Bill

